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SOME REMARKS ON SOUND CHANGES

Ikuo SHIMIZU

1. INTRODUCTION

Over many years there have been two ways to regard sound changes, namely:

- i) Neogrammarian theory that sound changes are regular without exceptions.
- ii) Theory of lexical diffusion, that is “every word has its own history” which originates from the dialect geography started by J. Gilliéron.

Until now many linguists have discussed this subject keenly but no satisfactory solution has yet been reached between these two theories.

Now William Labov has taken up this problem with new material from Philadelphian English in his article “Resolving the Neogrammarian controversy” in *Language* 57 (1981). He gave some interesting suggestions as a conclusion (p. 304-305). I still consider that he has not solved this difficult dispute. His suggestions of changing or abolishing such questions as “Does every word has its own history?”, “Is it phonemes that change?” “Are the Neogrammarians right or wrong?” are noteworthy and can lead to new ways of solving problems.

2. THE CHARACTER OF EACH THEORY

With the aid of Bloomfield’s terminology (phonetical:lexical / gradual:abrupt) which Labov (p.270) and other scholars use, I would like to make the positions of the two representative theories more clear and furthermore show two other combinations which could be conceived theoretically:

	Neogrammarian viewpoint	Viewpoint of lexical diffusion	X	Y
Phonetical	Gradual	Abrupt	Abrupt	Gradual
Lexical	Abrupt	Gradual	Abrupt	Gradual

What is represented by X, i. e. "abrupt" both phonetically and lexically is, of course, inconceivable as a process of sound change but if we observe all the sound changes from the viewpoint of the result, they all appear "abrupt", especially when we see such a formulation as $A > B$. As a matter of fact, there is no such process of sound change in which a sound and all the words which contain it are exposed and changed in a moment. However, it is remarkable that X-position indicates a terminal or final stage of sound change. Another alternative position which is marked by Y, i. e. "gradual" both phonetically and lexically, means that Y-position presupposes lexical diffusion. Such a process of sound change is not widespread but only sporadic. We should say that it is a rather isolated and spontaneous sound change which might possibly disappear next moment. Therefore, it is extremely doubtful if such a change should be regarded as a process of sound change. On the other hand the Y-position can be interpreted as a starting point of sound change. Together with the above mentioned fact, we should keep in mind that the X-position indicates a terminal point and the Y-position indicates a starting point.

If we go back to the Neogrammarian theory, its principle is to be "gradual" phonetically and "abrupt" lexically. Even if phonetical "gradual" is exchanged for "abrupt" (i. e. it becomes the same as the X-position), the Neogrammarian theory can still stand firm as long as lexical "abrupt" is not altered. It means that this theory is based on result and observes sound changes through result.

As concerns the viewpoint of lexical diffusion, it is unchangeable as long as it can keep lexical "gradual" although phonetical "abrupt" becomes "gradual".

From the above mentioned we could say the following: with the word "result" I mean that a sound change is completely finished and that it denotes a sound change that has penetrated all the words that contain such a sound which is supposed to be changed even if the sound change itself is very small phonetically, i. e. to reach a new stage means that the change is finished even if it happens within the frame of phonetic level. It can often continue until it becomes stable by reaching a phonemic level.

What distinguishes the Neogrammarian standpoint from that of lexical diffusion depends entirely on lexical "gradual" or "abrupt". It is quite natural and understandable for Labov to realize the importance of the lexical conditions and try to investigate them. He states the following about lexical diffusion (p.279):

"But even if every word had its own history, this would not necessarily be lexical diffusion. Lexical diffusion implies a rejection of the idea that phonetic conditioning fully accounts for sound change: that there are at least some words

whose behavior is not predicted by their phonetic composition. If the word is a fundamental unit of change, it is because some words undergo the change for reasons that are not phonetic."

At the same time Labov quotes a new idea from Wang's investigation (p.269):

"Exceptions to regular sound change might be caused by the overlapping operation of two rules in a bleeding relationship."

Further he says (p.303):

"Where lexical diffusion does occur, it is to be found most often in changes across subsystems — particularly lengthenings and shortenings in vowels, and changes of place of articulation in consonants."

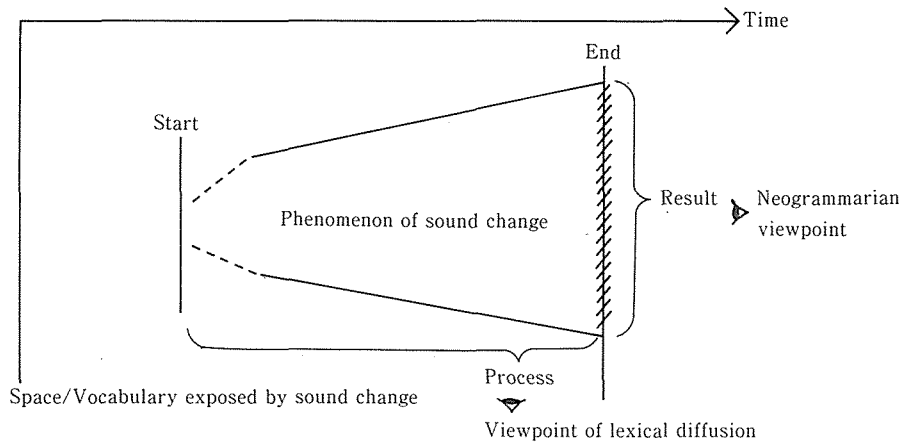
Labov establishes so-called "hierarchy of abstractness" and states "contrast BETWEEN subsets is greater than contrast WITHIN them" (p.299). It is very remarkable but if we go one step further, this implies that such variations are due to social-, age- and gender-differences of the individuals or due to situations or circumstances of the speech, which sociolinguistics demonstrates. Factors that cause lexical diffusion can be explained but not up to 100% definitely through extra-linguistic norms as is stated above. On the other hand the Neogrammarian theory is based entirely on intra-linguistic levels. It is interesting that lexical diffusion can achieve regularity to some extent with the support of sociolinguistic doctrines, which is parallel with the Neogrammarian way to attempt to explain exceptions of sound change by referring to analogy, metathesis etc.

3. THE TWO THEORIES COMPLEMENTING EACH OTHER

Another point which we should not forget in dealing with Labov's investigation is as follows. He works entirely with so-called transit problems or sound change in progress. It is true that his method is valid in order to survey proceeding sound changes but it can be applied only to the process of sound change or more correctly it is the best method to observe sound change in progress. With other words he takes no notice of the result of completely finished sound change. His method does not touch on result or it has no capacity to comment on this point. However, the Neogrammarian theory, which is based on result, has validity in this case.

In my opinion we should interpret the viewpoint of the Neogrammarians and of the lexical diffusion in the following way (see Fig. on next page) :⁽¹⁾

The final aim of the theory of lexical diffusion which is based on sociolinguistics or geographical linguistics is to try to observe only the process of the phenomenon. If the phe-



nomenon of the lexical diffusion stops and ends on the half way and it may remain as a geographical distribution, we can analyse it as difference in dialects or criteria of dialects from the Neogrammarian viewpoint. Therefore this method can not elucidate the completely ended phenomenon, i. e. the result. On the other hand the Neogrammarian theory is capable of describing the result accurately but this principle is not entitled to intervene in proceeding phenomenon. This school must transfer this task to the theory of lexical diffusion. One could say that the positions of these two theories to observe the phenomenon are quite different, which reminds me of the dichotomy “diachronic/synchronic” that F. de Saussure once devised.

The question which is put by Labov (p.269) should therefore be answered this way: It is not proper to ask which theory is right. Both theories have their own “raison d’être” and complement each other to explain the sound change as a whole. One commits an error if one tries to justify one of them. Both are compatible but only their focuses differ.

The problem still remains. In reconstructing sound shift from prehistoric times when there is no linguistic source until historic times when sporadic linguistic evidence begins to appear, it is impossible to apply the theory of lexical diffusion. In such a case we are forced to adopt the Neogrammarian way which can describe the result of the sound change. Just in this field, linguists who specialize in historical and comparative linguistics feel frustrated not to be able to follow or clarify the process of sound change that can no longer be traced. Some typical examples are:

Indo-European ⁽²⁾ *dw- > classical Armenian *erk-* :
erku ‘two’ > *dwō : Ved. *d(u)vā́*, GK. *dúō* (Hom), OCSl. *dŭva*, Lat. *duo* (with shortened *o*) ;
erki < *dwi- in *erkeam* ‘two years old’ = Skt. *dvi-*, GK. *d(w)i-*, Lat. *bī-*, in compounds ;

erknč'im, aor. *erkeay* 'I fear', *erkiwt* (III) 'fear' contain the zero grade of the root **dwei-*/*dwoi-*/*dwi-*: cf. Av. *dvaēā* 'menace, frightening thing', GK. *déos* (< **dwéyos*), etc. ;

erkar (IIb) 'long (of time)' : cf. Doric GK. *dārós* ('id' < **dwāró*).

(Quoted from R.Godel: 1975 p. 84)

Indo-European **o* > Germanic ⁽³⁾*a*

IE *oktō(u)* (L. *octō*, etc)—Go. *ahtau*, ON *átta*, OE *eahta*, O Fris *achto*, OS OHG *ahto* 'eight'

IE *ghosti-* (L. *hostis*, etc)—Go. *gasts*, ON *gastiR* (Runic), *gestr*, OE *giest*, OS OHG *gast* 'guest'

IE *ghorto-* (L. *hortus*, etc)—Go. *gards*, ON *garþr*, OE *geard*, OS *gard*, OHG *gart* 'yard, house'

(Quoted from E. Prokosch: 1939 §38, c)

The question is still not answered. Can we only trust the Neogrammarian theory in such a situation or is there a much better method?

Which of the two theories we should choose when we observe the process may also depend on quality (e.g. treatment of syllables or accentuation etc.) of sound change or on object (e.g. vowel/consonant/semi-vowel) which is exposed by the sound change. Applicability can be higher or lower depending on the character of the sound change that we investigate. I consider that it is the degree of completeness of sound change in view of result that determines the applicability of these theories. If the sound change is not finished, i. e. the degree of completeness is lower, it can lead to the theory of lexical diffusion. If this is to the contrary, the Neogrammarian theory should be applied.

4. CHARACTER OF VOWELS AND CONSONANTS IN SOUND CHANGE

When we observe sound change of a vowel such as Indo-European **o* > Germanic *a* which is illustrated in the previous chapter, I dare to insist that the distance between *o* and *a* is indefinite. Continuity is the right expression, with other words graduality is larger. In order to observe such a highly gradual process when it is traceable through abundant linguistic evidence, the theory of lexical diffusion is more suitable, just as Labov examines the change of the vowel quality of Philadelphia English in his present article.

Concerning sound change of a consonant such as the Armenian evidence *erk-* or Indo-European **t* > Germanic ⁽⁴⁾*p* etc.,

**treies*, Go. *preis*, ON *pr̥r*, OE *pr̥e*, OS *thrie*, OHG *drī*

**tū*, Go. ON OE *pū*, OS *thū*, OHG *dū*

**tod*, Go. *pata*, ON *pat*, OE *þæt*, OS *that*, OHG *daz*

(Quoted from Prokosch: 1939 §19)

“discreteness” predominates in consonants. It means that it is difficult for the theory of lexical diffusion to get into this field. It becomes to a great extent the Neogrammarian theory that controls these sound changes.

This is the main reason why the Neogrammarian theory is so successful in consonants. It should be noticed that Grimm’s law, Verner’s law, Grassmann’s law⁽⁵⁾, Bartholomae’s law⁽⁶⁾, Thurneysen’s law⁽⁷⁾ or Centum-Satem criteria of the ancient Indo-European dialects, all deal with consonant change. One of the chief factors in the establishment of such sound laws lies just in this abruptness of the consonants. Compare, for instance, with the complicated vowel shifts of final syllables in Germanic.⁽⁸⁾

Finally I would like to suggest the character of vowel/consonant in sound change in a simplified way by using an oppositional system.

	Vowel	Consonant
In sound change	+Gradual	–Gradual
	–Abrupt	+Abrupt

5. SUMMARY

The theory of the Neogrammarian school and that of lexical diffusion, over which there has been much scholarly debates, are by no means incompatible. On the contrary they contribute to the observation of sound change by complementing each other from their different viewpoints. In investigating a proceeding sound change or a vowel change when it is traceable step by step, the applicability of the theory of lexical diffusion is higher. When we study the result of a completed sound change or a consonant change which usually has a high degree of abruptness, the Neogrammarian method is more valid.

NOTES

- (1) An interesting observation on this matter is also made by Ralph (1980: p.9ff.).
- (2) cf. Schmitt (1981: p.71-72). The correspondence (as the result of the sound change) between Indo-European **dw-* and classical Armenian *erk-* can not be questioned (Meillet, 1925: p.6, "Au premier terme des composés, le grec a *dwi-*, et l'arménien *erki-*. Il y a donc un groupe de concordances singulières qui ne laisse aucun doute."). But the historical development from **dw-* to *erk-* is still unclear in spite of Meillet's (1936: §11) and Grammont's (1950: p.199) descriptions. A more plausible explanation is given by Pisani (1933: p.185f.), accepted by Szemerényi (1960: p.96), but rejected by Schmidt (1960:p.83f.). The detailed information on this problem should be referred to Schmitt (1972 [1974]: p.10f.).
- (3) cf. Streitberg (1963: §51), Krahe (1969: §30).
- (4) cf. Streitberg (1963: §117), Krahe (1969: §60).
- (5) cf. Szemerényi (1970: p.18f., 50).
- (6) cf. Szemerényi (1970: p.95f.).
- (7) cf. Thurneysen (1898: p.209-214).
- (8) cf. Streitberg (1963: §148ff.), Krahe (1969: §117ff.). A recent contribution to this issue, see Hollifield's article (1980, 1984), where the problem is fully discussed with new dimensions.

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